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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,911	03/29/2007	Ki-Hyun Kim	0001.1195	8344
49455	7590	09/23/2010	EXAMINER	
STEIN MCEWEN, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005			ABRAHAM, ESAW T	
			ART UNIT	PAPER NUMBER
			2112	
			NOTIFICATION DATE	DELIVERY MODE
			09/23/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptomail@smiplaw.com

Office Action Summary	Application No. 10/580,911	Applicant(s) KIM ET AL.	
	Examiner ESAW T. ABRAHAM	Art Unit 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/30/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/30/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Preliminary Amendment

1. The preliminary amendment filed on 05/30/06 has been entered.
2. Claims 1-20 are presented for examination.

Oath Declaration

3. The Oath filed on 03/29/07 complies with all the requirements set forth in MPEP 602 and therefore is accepted.

Information Disclosure Statement

4. The references listed in the information disclosure statement (IDS) submitted on 05/30/06 have been considered. The submission is in compliance with the provisions of 37 CFR 1.97. Form PTO-1449 is signed and attached hereto.

Priority

5. Acknowledgment is made of applicant's claim for **foreign priority** under 35 U.S.C. 119(a)-(d) which papers have been placed of record in the file.

Specification

6. The specification filed on 05/30/06 is objected because:
 - The Brief Description of the Drawings does not indicate that Figure 1 is prior art (see paragraphs 0017 and 0020).

Drawings

7. The formal drawings filed on 05/30/06 are objected because:
- Figure 1 should be designated by a legend such as – prior art - (see paragraph 0020) in order to clarify what is applicant's invention.

Claim Objections

8. Claims 1-20 are objected to because of the following informalities:
- The claims are objected to because the lines are crowded too closely together, making reading and entry of amendments difficult. Substitute claims with lines **one and one-half or double spaced** on good quality paper are required. See 37 CFR 1.52(b).
 - Claims 13 and 16 **require indentation**. Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(m). Appropriate correction is required
 - Claim 4, line 11 recites the limitation "there is a correlation between" and should and it should recite, ---correlating between--- to show proper antecedent.

Claim Rejections - 35 USC § 112, 2nd

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 1 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 13 and 16 recite the limitation "selecting code word bits for generating row parity information using code word bits not including other code word bits related to generation of the same row parity information among code word bits in the generated code word vectors" which is vague **with respect to how this selection step is being made.**

Claim 10, recites the limitation " selecting a first code word bit; and selecting a second code word bit among residual code word bits not including code word bits having a correlation with the first code word bit" which is vague **with respect to how this selection step is being made.**

Dependent claims depend from the base claims and inherently include limitations therein and therefore are rejected under 35 USC 112, 2nd paragraph as well

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non- statutory subject matter.

Claims 1, 10, 13 and 16 recite a "method" comprising two or three steps. The claim, if statutory, falls within the statutory class of "process."

"A process is... an act, or a series of acts, performed upon the subject matter to be transformed and reduced to a different state or thing." *Cochrane v. Deener*, 94 U.S. 780, 788 (1877).

"Transformation and reduction of an article "to a different state or thing" is the clue to the patentability of a process claim that does not include particular machines." *Diamond v. Diehr*, 450 U.S. 175, 184 (1981) (quoting *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972)).

There are cases suggesting that the lack of transformation is not determinative with respect to whether a claimed process is statutory. Those cases, however, involved inventions that at least used *machines* to transform *data*. For example, the court reviewing in *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1357 (Fed. Cir. 1999), set forth (citing *In re Alappat*, 33 F.3d 1526, 1544 (Fed. Cir. 1994) (en banc)) that a § 101 inquiry is directed to the determination of whether the claimed subject matter as a whole is a disembodied mathematical concept representing nothing more than a "law of nature" or an "abstract idea," or if the mathematical concept has been reduced to some practical application rendering it "useful." A claimed process that produces a useful, concrete, tangible result without pre-empting other uses of the mathematical principle falls within the scope of § 101. *AT&T Corp.* at 1358. The process held to be statutory in *AT&T Corp.*, however, required the use of switches and computers. *See, e.g., id.* at 1358 (AT&T's claimed process used "switching and recording mechanisms" to create a "signal" useful for billing purposes).

The "process" of instant claims 1, 10, 13 and 16 do not require any transformation and reduction of an article "to a different state or thing." Nor is the "process" tied to a particular machine that transforms data in such a way to produce a useful, concrete, and tangible result. Under a broad but reasonable interpretation of claim *, the subject matter of the claim requires at most human thought and paperwork.

Claims 1, 10, 13 and 16 do not recite any particular way of implementing the steps.

Claims 1, 10, 13 and 16 do not require any machine or apparatus to perform the steps.

Claims 1, 10, 13 and 16 do not recite any electrical, chemical, or mechanical acts or results, which are typical in traditional process claims.

Claims 1, 10, 13 and 16 do not call for any physical transformation of an article to a different state or thing, nor does it require any transformation of data or signals.

Claims 1, 10, 13 and 16 represent mere abstraction; i.e., a disembodied mathematical concept representing nothing more than an "abstract idea," which has not been reduced to some practical application that renders it "useful." As the Supreme Court has made clear, "[a]n idea of itself is not patentable." *In re Warmerdam*, 33 F.3d 1354, 1360 (quoting *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. (20 Wall.) 498, 507, 22 L.Ed. 410 (1874)).

Claims depend from base claims and are rejected under 35 USC 101 for similar reasons.

Conclusion

Art Unit: 2112

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Esaw T. Abraham whose telephone number is (571) 272-3812.

The examiner can normally be reached on M-F 8am-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Esaw T Abraham/
Primary Examiner, Art Unit 2112
09/14/10